

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

5. (currently amended) Process for the production of a superconducting cable having a single cable core, which contains at least one elongated superconducting element, and a flexible tube, which surrounds the cable core, said process comprising the steps of:

(a) continuously pulling the single cable core ~~is pulled continuously~~ from a supply unit;

(b) continuously pulling a metal strip ~~a metal strip is pulled continuously~~ from a strip supply unit;

(c) continuously forming a slotted tube around the metal strip ~~is formed continuously around the cable core with the metal strip~~ to form a slotted tube; welding a the longitudinal slot of the slotted tube ~~is welded~~ shut; corrugating and then the welded tube is ~~corrugated with the cable core inside the tube~~, where the inside diameter of the corrugated tube is larger than the outside diameter of the cable core to form a semi-finished superconducting cable;

(d) winding the semi-finished superconducting cable in at least one turn ~~consisting of the cable core and the corrugated tube is wound up on a cable drum, or the~~

Application No. 10/826,148  
Amendment Dated May 15, 2006  
Reply to Office Action Dated November 11, 2005

~~superconducting cable is laid to form at least one turn; and~~

(e) mechanically joining the ends of the cable core ~~are then mechanically joined~~  
to the ends of the corrugated tube while the cable is on the cable drum or is lying in at least one  
turn.

6. (previously presented) Process according to Claim 5, wherein the forming  
of the metal strip into a tube or the corrugation of the welded metal tube is carried out in such a  
way that the cable core has an excess length  $\Delta l$  in the corrugated metal tube, which is calculated  
according to the formula  $\Delta l = (R - r)\pi \times 2a$ , where  $R$  is the inner radius of the corrugated tube,  $r$   
the outer radius of the cable core, and  $a$  the number of turns.

7. (currently amended) Process according to Claim 5, wherein the excess  
length  $\Delta l$  is ~~at least~~ more than 0.25% of the original length of the cable core.

8. (previously presented) Process according to Claim 5, wherein the cable  
core contains a high-temperature superconductor.